

**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

PATENT APPLICATION

Appellants: **William D. Swart et al.** Case: **SEDN/5312**
Serial No.: **09/920,615** Examiner: **Betit, Jacob F.**
Filed: **08/03/01** Group Art Unit: **2164**
Confirmation #: **6958**
Title: **VIDEO AND DIGITAL MULTIMEDIA AGGREGATOR REMOTE
CONTENT CRAWLER**

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SIR:

APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2164 mailed December 20, 2007 finally rejecting claims 1-8, 30-33 and 35-51.

In the event that an extension of time is required for this Appeal brief to be considered timely, and a petition therefor does not otherwise accompany this Amended Appeal Brief, any necessary extension of time is hereby petitioned for.

Appellants believe the only fee due is the \$510 Appeal Brief fee which is being charged to counsel's credit card. In the event Appellants are incorrect, the Commissioner is authorized to charge any other fees to Deposit Account No. 20-0782/SEDN/5312.

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Real Party in Interest

The real party in interest is SEDNA PATENT SERVICES, LLC.

Related Appeals and Interferences

Appellants assert that no appeals or interferences are known to Appellants, Appellants' legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-33 and 35-57 are pending in the application. Claims 1-57 were originally presented in the application. Claims 9-29 and 52-57 are withdrawn from consideration. Claim 34 is cancelled without prejudice. Amendments to claims 1, 4, 38-39, 46 were previously presented and entered by the Examiner. Claims 1-8, 30-33 and 35-51 stand finally rejected as discussed below. The final rejection of claims 1-8, 30-33 and 35-51 is appealed.

Status of Amendments

All claim amendments have been entered.

Summary of Claimed Subject Matter

Embodiments of the present invention generally are directed to an apparatus and method for content search, packaging and delivery. Notably, the Appellants' invention utilizes cable television networks and allows a subscriber to obtain content within a resultant search via tuning to a particular television channel.

For the convenience of the Board of Patent Appeals and Interferences, Appellants' independent claims 1, 4 and 30 are presented below in claim format with elements reading on the various figures of the drawings and appropriate citations to at least one portion of the specification for each element of the appealed claims.

Claim 1 positively recites (with reference numerals, where applicable and cites to at least one portion of the specification added):

1. A remote content crawler (356) for use in a content search, packaging, and delivery system (200), comprising:
 - a remote content crawler processor (360) that controls the remote content crawler (356) (see Appellants' specification, p. 13, ll. 7-9);
 - a network resource processor (365) that acquires data related to resources (204) coupled to one or more communications networks (205) (see *Id.* at ll. 22-24);
 - a crawling criteria processor (361) that acquires crawling criteria, said crawling criteria having a plurality of conditions (see *Id.* at p. 14, ll. 23-25);
 - a crawling criteria checker (641) that determines if the acquired data meets said plurality of conditions of said crawling criteria (see *Id.* at p. 18, ll. 28-30);
 - a crawler content provider processor (363) that receives, processes and stores content provider listings such that a subscriber obtains desired

content via tuning a set top terminal (206) to a television channel carrying said desired content (see *Id.* at p.6 ,ll. 7-8, 28-30; p. 16, ll. 16-19); and
a network crawler (366), wherein the network crawler (366) crawls content providers (204) to acquire data related to available content in accordance with the crawling criteria (see *Id.* at p. 17, ll. 26-28).

Claim 4 positively recites (with reference numerals, where applicable and cites to at least one portion of the specification added):

4. An apparatus (356) for searching one or more communications networks (205), accessing content (204) available on the one or more communications networks (205), and acquiring access to the content, comprising:

one or more processors (360, 361, 363, 365, 367, 368) wherein the one or more processors (360, 361, 363, 365, 367, 368) receive information related to the content (204) (see Appellants' specification, p. 13, ll. 4-21);

a network crawler (366) coupled to the one or more processors (360, 361, 363, 365, 367, 368), wherein the network crawler (366) accesses the one or more communications networks (205) to locate available content (204) in accordance with a crawling criteria, said crawling criteria having a plurality of conditions (see *Id.* at p. 17, ll. 26-28);

a crawling criteria checker (641) that determines if the received information meets said plurality of conditions of said crawling criteria (see *Id.* at p. 18, ll. 28-30); and

a crawler content provider processor (363) that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal (206) to a television channel carrying said desired content (see *Id.* at p.6 ,ll. 7-8, 28-30).

Claim 30 positively recites (with reference numerals, where applicable and cites to at least one portion of the specification added):

30. A method for finding digital content (204) in a communications network (205), comprising:

acquiring network resource data (877), wherein the network resource data comprises address data for content servers (204) coupled to the one or more communications networks (205) (see Appellants' specification, p. 20, ll. 24-26);

acquiring crawling criteria (878), wherein crawling criteria has a plurality of conditions and are used during a crawling operation to search for the digital content (see *Id.* at p. 21, ll. 2-4);

acquiring content provider data (879), wherein content provider data includes digital content provider-related data (see *Id.* at ll. 7-16);

crawling network resources (881) in the one or more communications networks (205) in accordance with the crawling criteria (see *Id.* at p. 17, ll. 26-28);

determining (897), via a crawling criteria checker module (641), if the content provider data meets said plurality of conditions of said crawling criteria (see *Id.* at p. 18, ll. 28-30); and

providing at least one of said content provider data to a set top terminal of a subscriber via a television channel (see *Id.* at p.6 ,ll. 7-8, 28-30).

Grounds of Rejection to be Reviewed on Appeal

The Examiner has rejected claims 1, 4-8, 30-32, 35, 38-40 and 45-51 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,547,829 to Meyerzon et al. (Meyerzon) in view of U.S. Patent Application Publication No. 2002/0099697 A1 to Jensen-Grey in further view of U.S. Patent Application Publication No. 2001/0037494 to Johansson.

The Examiner has rejected claims 2-3 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, in further view of U.S. Patent Application Publication No. 2002/0032740 A1 to Stern et al. (Stern).

The Examiner has rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, and in further view of Appellants' admitted prior art.

The Examiner has rejected claims 36-37 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, and in further view of U.S. Patent Application Publication No. 2002/0010682 A1 to Johnson (Johnson).

The Examiner has rejected claims 41-44 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, and in further view of U.S. Patent No. 6,751,612 B1 to Schuetze et al. (Schuetze).

ARGUMENTS

I. THE EXAMINER FAILED TO ESTABLISH A *PRIMA FACIE* CASE OF OBVIOUSNESS BECAUSE THE COMBINATION OF MEYERZON, JENSEN-GREY AND JOHANSSON FAIL TO TEACH OR SUGGEST ALL OF THE CLAIM LIMITATIONS OF INDEPENDENT CLAIMS 1, 4 AND 30

A. 35 U.S.C. §103 Rejection of Claims 1, 4-8, 30-32, 35, 38-40 and 45-51

The Examiner has rejected claims 1, 4-8, 30-32, 35, 38-40 and 45-51 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson. Appellants respectfully traverse the rejection.

The Appellants respectfully submit that Meyerzon, Jensen-Grey and Johansson, alone or in any permissible combination, fail to teach or suggest at least the limitation of providing or obtaining desired content via tuning a set top terminal to a television channel carrying said desired content, as positively recited by the Appellants' independent claims. For example, Appellants' independent claim 1 (and similarly claims 4 and 30) recites:

1. A remote content crawler for use in a content search, packaging, and delivery system, comprising:
 - a remote content crawler processor that controls the remote content crawler;
 - a network resource processor that acquires data related to resources coupled to one or more communications networks;
 - a crawling criteria processor that acquires crawling criteria, said crawling criteria having a plurality of conditions;
 - a crawling criteria checker that determines if the acquired data meets said plurality of conditions of said crawling;
 - a crawler content provider processor that receives, processes and stores content provider listings, such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content; and
 - a network crawler, wherein the network crawler crawls content providers to acquire data related to available content in accordance with the crawling criteria.

In an exemplary embodiment, a crawling criteria checker module is used to determine if the contents of the hypertext files meet the conditions of the crawling criteria. (See Appellants' specification, p. 18, l. 22 – p. 19, l. 2). This eliminates unnecessary processing if the crawling criteria are not met. (See *Id.* at ll. 12-13). Moreover, the content may be made available on a specific channel of a cable television system. (See Appellants' specification, p. 6, ll. 7-8). Thus, resources of a cable television system that are readily available may be utilized as opposed to the need for access to a data network via a computer that may not be as readily available.

Appellants respectfully submit that Meyerzon, Jensen-Grey and Johansson, alone or in any permissible combination, fail to teach or suggest at least a remote content crawler for use in a content search, packaging and delivery system, comprising a crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content, as recited in claim 1. The Examiner concedes that Meyerzon and Jensen-Grey fail to teach this limitation. (See Office Action, §3). However, the Examiner asserts that Johansson bridges the gap left by Meyerzon and Jensen-Grey.

Appellants respectfully submit that Johansson fails to bridge the gap left by Meyerzon and Jensen-Grey because Johansson also fails to teach or suggest a remote content crawler for use in a content search, packaging and delivery system, comprising a crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content. Johansson teaches that a subscriber may log in and connect to the SI server over data network 10 (i.e. the Internet). (See Johansson, para. 0027). Based on a user profile, the SI server may transmit data relevant to the user's terminal over the data network 10. (See *Id.* at para. [0027] – [0030]). Alternatively, Johansson teaches that the SI server may “push” the information to the terminal in any IP channel, PPP, ADSL, cable modem, etc. (See *Id.* at par.

[0031] and [0032]). Notably, no data is transmitted to the user's terminal via tuning a set top terminal to a television channel carrying said desired content.

The Examiner cites paragraphs [0019], [0020], [0023] and [0024] as allegedly teaching a remote content crawler for use in a content search, packaging and delivery system, comprising a crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content. However, upon reviewing the cited paragraphs, Appellants respectfully disagree.

Johansson teaches an overview of a digital communications system, wherein data in the system is used to provide information on how to tune to services and to display the information. (See Johansson, para. [0019]). In other words, the data is needed by the terminals so that the terminals will know how to connect to the various networks, such as data network 10, satellite network 40, cable channel network 50 and terrestrial network 60. Appellants respectfully submit that paragraphs [0019] and [0020] do not teach or suggest that a subscriber is obtaining desired content via tuning a set top terminal to a television channel carrying said desired content.

Moreover, to gather the appropriate data and address the problem of needing data for a terminal to connect to one of the various networks, Johansson teaches the use of a SI server 70. The SI server 70 "tunes" into the different networks to perform an automatic channel search and collect information of the respective networks 10, 40, 50 and 60. (See *Id.* at para. [0022] – [0023]). Notably, Johansson fails to teach or suggest that a user tunes the terminal to obtain any desired data, but rather that the SI server is simply gathering information from the various networks. Subsequently, the information collected by the SI server may then be forwarded to a user's terminal over the data network 10 as discussed above. (See Johansson, para. [0027] – [0032]). Therefore, even if Meyerzon, Jensen-Grey and Johansson were permissibly combined, the combination would still fail to teach or suggest a remote content crawler for use in a content search, packaging and delivery system, comprising a

crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content.

Thus, Meyerzon, Jensen-Grey and Johansson alone or in combination do not teach or suggest Appellants' invention as recited in claim 1 as a whole. As such, Appellants submit that independent claim 1 is patentable over Meyerzon, Jensen-Grey and Johansson under 35 U.S.C. §103. Independent claims 4 and 30 recite relevant limitations similar to those recited in independent claim 1. Accordingly, for at least the same reasons discussed above, independent claims 4 and 30 also are patentable over Meyerzon, Jensen-Grey and Johansson under 35 U.S.C. §103. Furthermore, claims 5-8, 31-32, 35, 38-40 and 45-51 depend directly or indirectly from independent claims 4 and 30, while adding additional elements. Therefore, these dependent claims also are patentable over Meyerzon, Jensen-Grey and Johansson for at least the same reasons discussed above in regards to independent claims 1, 4 and 30. Therefore, Appellants respectfully request that the Examiner's rejection be withdrawn.

B. 35 U.S.C. §103 Rejection of Claims 2-3

The Examiner has rejected claims 2-3 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, in further view of Stern. Appellants respectfully traverse the rejection.

Claims 2-3 depend from independent claim 1 and recite additional limitations thereof. Moreover, for at least the reasons discussed above, the Meyerzon, Jensen-Grey and Johansson references fail to teach or suggest Appellants' invention as recited in claim 1. Accordingly, any attempted combination of the Meyerzon, Jensen-Grey and Johansson references with any other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claims. As such, Appellants submit that dependent claims 2-3 are patentable under 35 U.S.C. §103 over Meyerzon, Jensen-Grey and Johansson and in

further view of Stern. Therefore, Appellants respectfully request that the Examiner's rejection be withdrawn.

C. 35 U.S.C. §103 Rejection of Claim 33

The Examiner has rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 48-8, 30-32, 35, 38-40, and 45-51 above, and in further view of Appellants' admitted prior art. Appellants respectfully traverse the rejection.

Claim 33 depends from independent claim 30 and recites additional limitations thereof. Moreover, for at least the reasons discussed above, the Meyerzon, Jensen-Grey and Johansson references fail to teach or suggest Appellants' invention as recited in claim 30. Accordingly, any attempted combination of the Meyerzon, Jensen-Grey and Johansson references with any other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claims. As such, Appellants submit that dependent claim 33 is patentable under 35 U.S.C. §103 over Meyerzon, Jensen-Grey and Johansson and in further view of Appellants' admitted prior art. Therefore, Appellants respectfully request that the Examiner's rejection be withdrawn.

D. 35 U.S.C. §103 Rejection of Claims 36-37

The Examiner has rejected claims 36-37 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, and in further view of Johnson. Appellants respectfully traverse the rejection.

Claims 36-37 depend from independent claim 30 and recite additional limitations thereof. Moreover, for at least the reasons discussed above, the Meyerzon, Jensen-Grey and Johansson references fail to teach or suggest Appellants' invention as recited in claim 30. Accordingly, any attempted combination of the Meyerzon, Jensen-Grey and Johansson references with any

other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claims. As such, Appellants submit that dependent claims 36-37 are patentable under 35 U.S.C. §103 over Meyerzon, Jensen-Grey and Johansson and in further view of Johnson. Therefore, Appellants respectfully request that the Examiner's rejection be withdrawn.

E. 35 U.S.C. §103 Rejection of Claims 41-44

The Examiner has rejected claims 41-44 under 35 U.S.C. §103(a) as being unpatentable over Meyerzon in view of Jensen-Grey in further view of Johansson as applied to claims 1, 4-8, 30-32, 35, 38-40, and 45-51 above, and in further view of Schuetze. Appellants respectfully traverse the rejection.

Claims 41-44 depend from independent claim 30 and recite additional limitations thereof. Moreover, for at least the reasons discussed above, the Meyerzon, Jensen-Grey and Johansson references fail to teach or suggest Appellants' invention as recited in claim 30. Accordingly, any attempted combination of the Meyerzon, Jensen-Grey and Johansson references with any other additional references, in a rejection against the dependent claims, would still result in a gap in the combined teachings in regards to the independent claims. As such, Appellants submit that dependent claims 36-37 are patentable under 35 U.S.C. §103 over Meyerzon, Jensen-Grey and Johansson and in further view of Schuetze. Therefore, Appellants respectfully request that the Examiner's rejection be withdrawn.

CONCLUSION

Thus, Appellants submit that all of the claims presently in the application are allowable under the provision of 35 U.S.C. §103.

For the reasons advanced above, Appellants respectfully urge that the rejection of claims 1-8, 30-33 and 35-51 is improper. Reversal of the rejection of the Final Office Action is respectfully requested.

Respectfully submitted,

8/19/08
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CLAIMS APPENDIX

1. (previously presented) A remote content crawler for use in a content search, packaging, and delivery system, comprising:

- a remote content crawler processor that controls the remote content crawler;

- a network resource processor that acquires data related to resources coupled to one or more communications networks;

- a crawling criteria processor that acquires crawling criteria, said crawling criteria having a plurality of conditions;

- a crawling criteria checker that determines if the acquired data meets said plurality of conditions of said crawling criteria;

- a crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content; and

- a network crawler, wherein the network crawler crawls content providers to acquire data related to available content in accordance with the crawling criteria.

2. (original) The remote content crawler of claim 1, further comprising:

- a content crawler results processor;

- a metadata acquisition processor;

- a plurality of crawling servers coupled to the network crawler; and

- one or more databases, the one or more databases storing information and data generated in and received by the remote content crawler.

3. (original) The remote content crawler of claim 2, wherein the one or more databases, comprises:

- a content provider listing database;

- a crawling criteria database; and

- a network resources database.

4. (previously presented) An apparatus for searching one or more communications networks, accessing content available on the one or more communications networks, and acquiring access to the content, comprising:

one or more processors, wherein the one or more processors receive information related to the content;

a network crawler coupled to the one or more processors, wherein the network crawler accesses the one or more communications networks to locate available content in accordance with a crawling criteria, said crawling criteria having a plurality of conditions;

a crawling criteria checker that determines if the received information meets said plurality of conditions of said crawling criteria; and

a crawler content provider processor that receives, processes and stores content provider listings such that a subscriber obtains desired content via tuning a set top terminal to a television channel carrying said desired content.

5. (original) The apparatus of claim 4, wherein the network crawler comprises one or more crawling servers, wherein each of the one or more crawling servers searches the one or more communications networks according to a specific crawling criteria.

6. (original) The apparatus of claim 5, wherein the network crawler is a World Wide Web robot, wherein the network crawler traverses a hypertext structure of the network and retrieves the content and recursively retrieves additional content referenced in the retrieved content.

7. (original) The apparatus of claim 4, wherein the one or more processors, comprises:

a crawler processor coupled to the network crawler, wherein the crawler processor receives crawling schedule information and content search criteria;

a network resource processor coupled to the network crawler, wherein the network resource processor aggregates resource addresses of resources coupled to the one or more communications networks;

a crawling criteria processor that compiles data related to searches to be conducted by the network crawler and generates specific crawling criteria; and

a crawler content provider processor coupled to the network crawler that identifies, tracks, indexes and ranks providers of the content, and generates content provider data, wherein the network crawler receives the content provider data, the specific crawling criteria and the resource addresses and crawls the network based on the received content provider data, the specific crawling criteria, and the resource addresses.

8. (original) The apparatus of claim 7, further comprising a content crawler results processor that receives content data from the network crawler, and that processes the content data and routes sorted and formatted crawling results for storage.

9. (withdrawn) An apparatus for finding digital content in one or more communications networks, comprising:

means for building and maintaining network resource data, wherein the network resource data contains address data for content servers coupled to the one or more communications networks;

means, coupled to the means for building and maintaining network resource data, for storing the network resource data;

means for building and maintaining crawling criteria, wherein the crawling criteria are used during a crawling operation to search for the digital content;

means for building and maintaining content provider data, wherein the content provider data comprises data related to potential providers of content on the one or more communications networks; and

means, coupled to the means for building and maintaining network resource data, the means for building and maintaining crawling criteria, and the

means for building and maintaining content provider data, for crawling the communications network.

10. (withdrawn) The apparatus of claim 9, wherein the means for building and maintaining network resource data includes means for indexing address types.

11. (withdrawn) The apparatus of claim 10, wherein the address types include top-level domain and subdomain names, Universal Resource Identifiers, Universal Resource Locators (URLs), and Internet Protocol (IP) address numbers.

12. (withdrawn) The apparatus of claim 10, wherein the means for indexing address types is scalable to accommodate future naming conventions.

13. (withdrawn) The apparatus of claim 9, wherein the means for building and maintaining the network resource data includes means for updating the address data.

14. (withdrawn) The apparatus of claim 13, wherein the means for updating the address data, comprises:

- means for receiving hyperlinked domain names;

- means for downloading domain name records from public and private domain name registration databases;

- means for synchronizing a local Domain Name Service (DNS) database with one or more DNS databases over the one or more communications networks;

- means for performing reverse domain resolution by locating URLs associated with allowable IP addressing numbers; and

- means for verifying Domain Name Service aliases and duplicate URLs against IP addresses to eliminate redundant domain names.

15. (withdrawn) The apparatus of claim 9, wherein the network resource data comprises:

- URL owner identity;
- URL owner contact information;
- available content types;
- expiration time of the domain name; and
- subdomain names to be excluded during crawling.

16. (withdrawn) The apparatus of claim 9, wherein the crawling criteria, comprises:

- terms, phrases and keywords;
- data type descriptions;
- metadata field names; and
- metadata type descriptors, wherein the metadata type descriptors are associated with eligible content as one or more of hypertext descriptions and embedded file and data stream attributes and metadata.

17. (withdrawn) The apparatus of claim 9, wherein the means for building and maintaining crawling criteria comprises automatic means for building and maintaining crawling criteria.

18. (withdrawn) The apparatus of claim 17, wherein the automatic means comprises:

- means for analyzing and importing metadata schemes for standardized and proprietary content formats;
- means for parsing metadata field names and descriptive terms; and
- means for analyzing hypertext associated with desired hyperlinks and for analyzing text proximate to the desired hyperlinks, wherein the means for analyzing hypertext identify terms that relate to a data type or content category.

19. (withdrawn) The apparatus of claim 9, wherein the means for building and maintaining crawling criteria comprises manual means for building and maintaining crawling criteria.

20. (withdrawn) The apparatus of claim 9, further comprising means for storing the crawling criteria.

21. (withdrawn) The apparatus of claim 9, wherein the means for building and maintaining content provider data, comprises means for ranking content providers.

22. (withdrawn) The apparatus of claim 21, wherein criteria for ranking the content providers, comprises:

- quantity of available content;
- provider professional association membership;
- amount of content requested and downloaded by users of the communications network; and
- content provider ratings, wherein the content provider ratings are provided by the users of the communications network.

23. (withdrawn) The apparatus of claim 21, wherein a ranking of a content provider determines how frequently the content provider is crawled.

24. (withdrawn) The apparatus of claim 9, wherein the means for crawling the communications network comprises one or more crawling servers, wherein the means for building and maintaining the network resource data comprises means for analyzing and subdividing the network resource data and means for providing the subdivided network resource data to the one or more crawling servers.

25. (withdrawn) The apparatus of claim 24, wherein a crawling server comprises:
means for reading the subdivided network resource data;

means for communicating with a network resource; and
means for requesting and downloading data from the network resource.

26. (withdrawn) The apparatus of claim 25, wherein the crawling server, further comprises:

means for comparing the content to the crawling criteria, wherein the crawling server provides data related to the content when the means for comparing indicates the crawling criteria are satisfied; and

means for following links from a first network resource to subsequent network resources, wherein the means for following links comprises:

means for analyzing hypertext structure of the first network resource to determine if the links have been crawled,

means for determining if a network resource has been downloaded or updated since a previous crawl of the network resource, and

means for analyzing the hypertext structure to determine if the link points to a network resource comprising a web page or other hypertext files.

27. (withdrawn) The apparatus of claim 26, wherein the crawling server, further comprises:

means for caching hypertext files containing the data related to the content;

means for caching the links from the first network resource to subsequent network resources; and

means for indexing web pages and other hypertext files of interest.

28. (withdrawn) The apparatus of claim 26, wherein the means for comparing the content to the crawling criteria comprises a comparison algorithm that compares elements in a hypertext file to the crawling criteria.

29. (withdrawn) The apparatus of claim 9, further comprising:

means, coupled to the means for crawling the communications network, for acquiring and processing metadata related to a network resource; and

means, coupled to the means for acquiring and processing metadata related to a network resource, for processing content results from the crawled network resources.

30. (previously presented) A method for finding digital content in a communications network, comprising:

acquiring network resource data, wherein the network resource data comprises address data for content servers coupled to the one or more communications networks;

acquiring crawling criteria, wherein crawling criteria has a plurality of conditions and are used during a crawling operation to search for the digital content;

acquiring content provider data, wherein content provider data includes digital content provider-related data;

crawling network resources in the one or more communications networks in accordance with the crawling criteria;

determining, via a crawling criteria checker module, if the content provider data meets said plurality of conditions of said crawling criteria; and

providing at least one of said content provider data to a set top terminal of a subscriber via a television channel.

31. (original) The method of claim 30, further comprising storing the network resource data, the crawling criteria, and the content provider data in one or more databases.

32. (original) The method of claim 30, wherein acquiring network resource data comprises indexing the address data according to one or more address types.

33. (original) The method of claim 32, wherein the address types include top-level domain and subdomain names, Universal Resource Identifiers, Universal Resource Locators (URLs), and Internet Protocol (IP) address numbers.

34. (canceled).

35. (original) The method of claim 30, further comprising updating the address data.

36. (original) The method of claim 35, wherein updating the address data, comprises:

- receiving hyperlinked domain names for the network resources;
- downloading domain name records from public and private domain name registration sources;
- synchronizing local Domain Name Service (DNS) databases with one or more DNS databases over the one or more communications networks;
- performing reverse domain name resolution, comprising locating URLs associated with allowable IP address numbers;
- verifying DNS aliases and duplicate URLs against IP addresses; and
- eliminating any duplicate URLs identified by the verifying step.

37. (original) The method of claim 30, wherein the network resource data comprises:

- URL owner identity;
- URL owner contact information;
- available content types;
- expiration time of the domain name; and
- subdomain names to be excluded during crawling.

38. (previously presented) The method of claim 30, wherein the crawling criteria, comprises:

terms, phrases and keywords;
data type descriptions;
metadata field names; and
metadata type descriptors, wherein the metadata type descriptors are associated with eligible content as one or more of hypertext descriptions and embedded file and data stream attributes and metadata.

39. (previously presented) The method of claim 30, wherein acquiring the crawling criteria comprises automatically acquiring the crawling criteria.

40. (original) The method of claim 39, wherein automatically acquiring the crawling criteria, comprises:

analyzing and importing metadata schemes for standardized and proprietary content formats;
parsing metadata field names and descriptive terms;
analyzing hypertext associated with desired hyperlinks;
analyzing text proximate to the desired hyperlinks, wherein analyzing hypertext identifies terms that relate to a data type or content category.

41. (original) The method of claim 30, wherein acquiring the crawling criteria comprises acquiring the crawling criteria through manual input.

42. (original) The method of claim 30, wherein acquiring the content provider data comprises ranking content providers.

43. (original) The method of claim 42, wherein a ranking of a content provider is based on one or more of quantity of available content, provider professional association membership, amount of content requested and downloaded by users of the communications network, and content provider ratings, wherein the content provider ratings are provided by the users of the communications network.

44. (original) The method of claim 43, further comprising determining a frequency of crawling a content provider based on the ranking of the content provider.

45. (original) The method of claim 30, wherein crawling the network resources comprises crawling with one or more crawling servers.

46. (previously presented) The method of claim 45, further comprising
 subdividing the network resources;
 assigning the subdivided network resources to the one or more crawling servers; and
 at a crawler server:
 reading data from the assigned network resources,
 communicating with the assigned network resources,
 downloading data from the assigned network resources.

47. (original) The method of claim 46, further comprising:
 comparing digital content from one or more of the assigned network resources to the crawling criteria; and
 acquiring data related to content that satisfies the crawling criteria.

48. (original) The method of claim 46, further comprising:
 following links from a first network resource to subsequent network resources, wherein following the links comprises:
 analyzing hypertext structure of the first network resource to determine if the links have been crawled,
 determining if a network resource has been downloaded or updated since a previous crawl of the network resource, and
 analyzing the hypertext structure to determine if the link points to a network resource comprising a web page or other hypertext file.

49. (original) The method of claim 48, further comprising:

- caching hypertext files containing the data related to the content;
- caching the links from the first network resource to subsequent network resources; and
- indexing web pages or other hypertext files of interest.

50. (original) The method of claim 48, wherein comparing the content to the crawling criteria comprises using a comparison algorithm that compares elements in a hypertext file to the crawling criteria.

51. (original) The method of claim 30, further comprising:

- acquiring and processing metadata related to a network resource; and
- processing content results from the crawled network resources.

52. (withdrawn) An apparatus for controlling a remote content crawler having one or more crawling servers, the remote content crawler capable of searching one or more communications networks for data related to content available on the one or more communications networks, the apparatus, comprising:

- means for communicating with components of the one or more communications networks;
- means, coupled to the communications means, for executing crawling of the one or more communications networks by the remote content crawler;
- means, coupled to the means for executing crawling, for routing data received by the remote content crawler; and
- means, coupled to the data routing means, for aggregating data related to resources of the one or more communications networks, wherein the remote content crawler uses the aggregated data to search the one or more communications networks.

53. (withdrawn) The apparatus of claim 52, further comprising:

means, coupled to the communications means, for building a crawling criteria database, wherein the crawling criteria comprises one or more of hypertext search guidelines, data type list, metadata search criteria, and keyword lists.

54. (withdrawn) The apparatus of claim 52, further comprising:

means for building a content provider database, wherein data related to content providers is tracked, indexed, and ranked.

55. (withdrawn) The apparatus of claim 52, further comprising:

means for retrieving and routing metadata related to the content available on the one or more communications networks; and

means, coupled to the means for retrieving and routing the metadata related to the content available on the one or more communications networks, for indexing and formatting the retrieved metadata.

56. (withdrawn) The apparatus of claim 52, wherein the means for executing crawling, comprises:

means for storing data related to crawling the one or more communications networks;

means for initiating crawling of the one or more communications networks, the means for initiating crawling comprising means for receiving administrative data related to the crawling of the one or more communications networks; and

means for analyzing a resource data set of the one or more communications networks to subdivide the resource dataset into one or more smaller resource data sets, wherein the subdivision is based on one or more of overall size of the resource data set, and a number of available crawling servers.

57. (withdrawn) The apparatus of claim 57, wherein the means for executing crawling further comprises:

means for determining if contents of a hypertext files meet conditions of crawling criteria, comprising:

means for parsing the contents of the hypertext files, and

means for comparing the parsed content to the criteria in a criteria database, wherein if a hypertext file contains sufficient matching data, the hypertext file is cached.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None